DOE F 1332.1 (04-89)

U.S. DEPARTMENT OF ENERGY REPORTING REQUIREMENTS CHECKLIST

All other editions

obsolete		T	
PROGRAM/PROJECT TITLE		2. IDENTIFICATION NUMBER	
Design, Development, Production, and System of a Multi-Mission Radioisotope Thermoelectri (MMRTG)	n Integration c Generator	DE-RP03-02SF22307	
3. PARTICIPANT NAME AND ADDRESS		-	
TBD			
4. PLANNING AND REPORTING REQUIREMENTS			
I PERMINIOTHE NEI ONTHIO NEGOTIEMENTO			
A. General Management	Frequency	E. Financial Incentives	Frequency
X Management Plan	X, O, C	Statement of Income and Expense	
X Status Report	M		
X Summary Report	М	Balance Sheet	
		Cash Flow Statement	
B. Schedule/Labor/Cost		Statement of Changes in Financial Position	
X Milestone Schedule/Plan	X, O, C, Y	Loan Drawdown Report	
X Labor Plan	X, O, C, Y	Operating Budget	
Facilities Capital Cost of Money Factors Computation		Supplementary Information	
Contract Facilities Capital and Cost of Money			
X Cost Plan X Milestone Schedule/Status	X, O, C, Y	F. Technical	
X Milestone Schedule/Status X Labor Management Report	M M	X Notice of Energy RD&D Project	Y
X Cost Management Report	M	(Required with any of the following)	'
		<u>_</u> _	
c. Exception Reports		X Technical Progress Report	M
Conference Booord	_	Droft for Daview	
X Conference Record X Hot Line Report	A	Draft for Review Final for Approval	
That Line Report		Τιπαιτοι Αρριοναι	
D. Performance Measurement		X Topical Report	Α
		X Final Technical Report	Р
Management Control System Description		Double for Devices	
X WBS Dictionary		Draft for Review Final for Approval	
X Index	X, O, C	Γιπαιτοι Αρριοναι	
X Element Definition	O, C	X Software	Α
		X Other (Specify) See attached	
X Cost Performance Reports		SF-294 (Subcontracting Report for Individual contracts) SF-295 (Summary Subcontracting Report)	S
X Format 1 - WBS	М	Reports Required by CDRL	Y
X Format 2 - Function	M	Government Property Report	A
X Format 3 - Baseline	M	Weekly Critical Issues Report (Every Wed. by 10 AM EST)	Weekly
5. FREQUENCY CODES			
A - As Required M - Month	ıly	S - Semi-Annually (4/20 and 10/20)	
	After Award	X - With Proposal/Bid/Application or with Signific	
F - Final (end of effort) P - End of	FIIdSE	Y - Yearly or Upon Renewal of Contractual Agree	5111 C 111 (10/20)
6. SPECIAL INSTRUCTIONS (ATTACHMENTS)			
X Report Distribution List/Addressees		Analysis Thresholds	
Reporting Elements		Work Breakdown Structure	
y Due Dates		X Other (see attached)	
X		8. REVIEWED BY (SIGNATURE AND DATE)	
7. PREPARED BY (SIGNATURE AND DATE)			

REPORTING REQUIREMENTS CHECKLIST

PURPOSE

The checklist identifies and communicates additional reporting requirements which are not otherwise set forth in DOE contractual agreement. It will be included as part of the contractual agreements. The checklist will be completed for each contract or financial incentives agreement. If necessary, special instructions may be appended to modify the checklist to adapt it to specific situations.

INSTRUCTIONS

- Item 1. Enter the title of the project as indicated in the procurement request, contract, interagency agreement, initiating memorandum, or official award, as appropriate.
- **Item 2.** Enter the identification number of the procurement request, contract award, or financial incentives agreement, as appropriate.
- Item 3. Enter the name and address of the participant.
- Item 4. Check spaces to indicate plans and reports selected. For each reporting requirement selected, indicate the frequency of delivery using one of the frequency codes from Item 5. The addressees to whom reports will be sent and the total number of copies required will be referenced in an attached coded distribution list.

- Note: Frequency codes represent specific reporting frequencies for each selected report. The frequencies are recommended in the solicitation and negotiated prior to award. The number of copies required and the addressees are similarly finalized prior to award.
- **Item 5.** This item lists the possible frequency codes to be applied in the selection of reporting requirements.
- **Item 6.** Attach special instructions as necessary. Check the appropriate box(es).
- Item 7. Signature of person preparing checklist and the date prepared.
- Item 8. Signature of person reviewing the checklist and date reviewed.

REPORTING REQUIREMENTS CHECKLIST

Item 6. <u>SPECIAL INSTRUCTIONS</u>

1.1 Schedule for delivery of Phase I-VI reports:

Frequency:	<u>Due Dates:</u>
A (As Required)	Within 5 calendar days after the event initiating the report for the Conference Record of Hot Line Report and within 30 days for all other.
C (At contract change)	Within 30 calendar days after negotiated change.
F (Final Report)	Within 45 calendar days after end of study effort, requires Contracting Officer's approval.
M (Monthly)	By the 19th calendar day of the following month.
O (At contract award)	Within 30 calendar days after contract award.
P (At end of phase)	Within 45 calendar days after end of phase.
S (Semiannually)	Within 20 calendar days after end of Government fiscal half year.
X (With proposal)	With Proposal.
Y (Yearly)	Within 20 calendar days after end of the Government fiscal year or upon contract renewal.
Weekly	By 10:00am on each Wednesday by e-mail.

REPORTING REQUIREMENTS CHECKLIST

- 6. <u>SPECIAL INSTRUCTIONS</u> (Continued)
 - 1.2 Monthly Status Report shall address Safety, Reliability, and Quality Assurance and Environmental issues, in addition to those topics specified in the "Uniform Reporting System for Contractors," DOE Order 1332.1A
 - 1.3 The attached Phase I-VI Contract Data Requirements List (CDRL) specifies the various reports/plans required, the address codes to which they must be delivered, and the total number of copies required as well as lists the program/technical documents required by the Statement of Work. The SOW indicates the required DOE approvals. The CDRL indicates the frequency of issue and dates due.
 - 1.4 The Contractor may recommend alternative substitutions, in order to increase cost savings, that are the natural products of the Contractor's internal equivalent for the reporting requirements checklist. The DOE Contracting Officer and the Project Manager shall approve the substitution prior to finalizing the contract.

CONTRACT DATA REQUIREMENTS LIST (CDRL)

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
01 (SOW 1.10.1, 2.13.1, 3.11.1, 4.11.1, 5.11.1)		Describes the approach to performing the effort and producing the products identified in the contractual agreement, and the technical, schedule, cost, and financial management control systems to be used to manage that performance. (Example in DOE Order 1332.1A)	3,1,1,1	All Phases	X,O,C	A, C, D, O
02 (SOW 1.10.1, 2.13.1, 3.11.1, 4.11.1, 5.11.1)	Status Report	Provides a concise narrative assessment of the status of the work being performed. (Example in DOE Order 1332.1A)	2,1,1,1,1,1	All Phases	Monthly	A, B, C, D, G, O
03 (SOW 1.10.4, 2.13.4, 3.11.4, 4.11.4, 5.11.4)	, .	Provides a concise, top level graphical summary of schedule, labor, and cost performance against the approved baseline plans. (Example in DOE Order 1332.1A)	2,1,1,1,10,1	All Phases	Monthly	A, B, C, D, J, O
04	Milestone Schedule/ Plan	Establishes the time schedule for accomplishing the planned events and milestones for each reporting category identified in the contractual agreement. (Example in DOE Order 1332.1A)	2,1,1,1,1	All Phases	X,O,C,Y	A, C, D, G, O

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
05	Labor Plan	Provides a baseline plan to allocate direct labor to each reporting element required by the contractual agreement. (Example in DOE Order 1332.1A)	2,1,1,1	All Phases	X,O,C,Y	A, C, D, O
06	Cost Plan	Establishes the plan for accruing total costs and establishes the basis for the measurement of actual cost accumulation and provides basic information for updating and forecasting budget requirements. (Example in DOE Order 1332.1A)	2,1,1,1,1	All Phases	X,O,C,Y	A, C, D, G, O
07 (SOW 1.10.3, 2.13.3, 3.11.3, 4.11.3, 5.11.3)	Milestone Schedule/ Status	Provides the status of activities and events against the Baseline Milestone Plan. The status should be presented as part of the normal monthly meetings. (Example in DOE Order 1332.1A)	2,1,1,1,1,1	All Phases	Monthly	A, B, C, D, G, O
08	Labor Management Report	Provides status of labor resource utilization to be compared with the Labor Plan. (Example in DOE Order 1332.1A)	2,1,1,1,1	All Phases	Monthly	A, B, C, D, O
09	Cost Management Report	Provides actual cost status for the reporting and prior periods, and estimates costs for the remainder of the fiscal year. (Example in DOE Order 1332.1A)	2,1,1,1,1,10, 1,1	All Phases	Monthly	A, B, C, D, G, J, O, Q

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
10 (SOW 1.10.1, 2.13.1, 3.11.1, 4.11.1, 5.11.1)	WBS Dictionary Index	Provides the work breakdown structure elements extended to the lowest level agreed upon with DOE. (Example in DOE Order 1332.1A)	2,1,1	All Phases	X,O,C	A, C, D
11	WBS Element Definition	Provides a description of the work breakdown structure elements contained in the index and their relationship to design and funding documents. (Example in DOE Order 1332.1A)	2,1,1	All Phases	O,C	A, C, D
12 (SOW 1.10.4, 2.13.4, 3.11.4, 4.11.4, 5.11.4)	Cost Performance Reports (Format 1- WBS Format 2 - Function Format 3 - Baseline)	A monthly report of budgeted, earned, and actual cost of work performed, and of budgeted and estimated costs at completion, with related variances by work breakdown structure element. (Example in DOE Order 1332.1A)	2,1,1,1,10	All Phases	Monthly	A, C, D, G, J
13	Notice of Energy R&D Project	Notification of research and/or development information.	1,1,1	All Phases	Υ	A, C, D
14	Technical Progress Report	Provides a summary of the work performed including the technical and scientific results. (E-mail preferred)	1,1,1,1,1,1, 10,1,1,5,1,1, 1,1,1	All Phases	Monthly	A, B, C, E, F, H, J, L, M, N, O, P, R, S, T
15	Topical Report	Provides a comprehensive report of the technical results of work performed on a specific task.	1,1,1,1,1,1,1	All Phases	As required	A, B, C, D, O, R, S
16	Final Technical Report	Provides a technical summary of the total work performed under the contract.	3,1,1,1,1,10, 1,5,1,1,1	All Phases	At the end of each Phase	A, B, C, D, E, J, L, N, O, R, S

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
17 (SOW 3.9, 4.9, 5.9)	Software Codes	Provides a functional description and an executable copy of the computer codes used in support of the NEPA and launch safety support processes.	2,1	Phases III-V	As required	L, TBD
18	Subcontracting Report for Individual Contracts	Form SF-294	1,1,1	All Phases	Semi- Annually (4/20 and 10/20)	C, D, U
19	Summary Subcontracting Report	Form SF-295	1,1,1	All Phases	Yearly (10/20)	C, D, U
20	Government Property Report	Provides a listing of all capital equipment and sensitive items acquired or furnished under this contract.	1,1,1	All Phases	Semi- Annually (4/20 and 10/20)	A, C, D
21 (SOW 1.10.4, 2.13.4, 3.11.4, 4.11.4, 5.11.4)	Weekly Critical Issues Report	Provides a description of the highlights and critical issues on a weekly basis. (E-mail preferred)	1,1,1,1,1,1,1	All Phases	Every Wed by 10 AM EST	A, B, C, E, L, O, R
22 (SOW 1.10.3, 2.13.3, 3.11.3, 4.11.3, 5.11.3)	Project Meeting Agenda/Project Meeting Minutes	Describes monthly management level project meetings with DOE to include agenda and minutes. (E-mail preferred)	1,1,1	All Phases	As required	A, C, O
23 (SOW 1.10.1, 2.13.1, 3.11.1, 4.11.1, 5.11.1)	Project Baseline Plan (with disk)	Provides a contract baseline plan consistent with the DOE Program Management System to an agreed-upon level of detail from the Contractor's detailed work breakdown structure.	3,1,1	All Phases	Within 3 months of contract award	A, C, O

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
24 (SOW 1.10.2, 2.13.2, 3.11.2, 4.11.2, 5.11.2)	Review Plan	Lists reviews to be conducted and outlines procedures used to conduct these reviews.	3,1,1	All Phases	As required	A, C, O
25	Request for Publications and/or Abstracts and Papers	Where the Contractor or its employees desire to publish information regarding scientific or technical developments made or conceived of in the course of, or under this contract, such information must be submitted to DOE for patent approval prior to release or publication.	3,1	All Phases	As required	A, C
26 (SOW 1.10.2, 2.2, 2.13.2, 3.2, 3.11.2, 4.2, 4.11.2, 5.2, 5.11.2)	Requirements Review	Formal review of MMRTG and Mission Requirements for potential NASA missions to verify that qualification of the MMRTG is not compromised.	3,1,10,1, TBD	All Phases	Not less than 2 weeks prior to the formal review meetings	A, C, J, O, TBD-program participants
27 (SOW 1.3, 1.10.2, 2.3, 2.13.2)	Design Review Data Package (Preliminary–PD R; Final–FDR)	Documentation provided to reviewers prior to each formal review to include drawings, specification, and design criteria and reliability analyses that define the design being reviewed.	3,1,10,1, TBD	Phases I,II	As required	A, C, J, O, TBD-program participants
28 (SOW 1.2, 2.2)	ETG and MMRTG Product Specification	Provides detailed, precise description of the ETG and MMRTG.	3,1,10,1,1	Phases I,II	As required	A, C, J, O, S

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
29 (SOW 1.4)	Thermoelectric Component Qualification Plan	Provides documentation for the thermoelectric component fabrication and qualification capability.	2,1,1,1,1	Phase I	As required	A, C, O, R, S
30 (SOW 1.4.4)	Thermoelectric Component Test Plan	Provides documentation for the testing planned for the thermoelectric components.	2,1,1,1,1	Phase I	As required	A, C, O, R, S
31 (SOW 1.5, 2.5)	ETG Fabrication Plan	The Fabrication Plan shall apply to major components and assemblies including, but not limited to, fabrication approach, schedules, facilities availability. The Plan shall include: any ES&H concerns and how these concerns will be resolved or minimized, description of nondestructive inspection methods for critical components, and identify inspection and test activities, characteristics, inspection methods, and acceptance criteria.	2,1,1,1,1	Phases I,II	As required	A, C, O, R, S
32 (SOW 2.4, 3.3, 4.3, 5.3)	Thermoelectric Component Performance Report	Provides documentation for the performance, reliability and reproducibility of the thermoelectric components.	2,1,1	Phases II-V	As required	A, C, O
33 (SOW 1.6)	Engineering ETG Test Plan	Describes the test requirements and identifies pass/fail criteria for each test.	2,1,1,10,1,1, 1	Phase I	Prior to testing	A, C, E, J, O, R, S

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
34 (SOW 1.6)	Engineering ETG Test Report	Provides a stand-alone document encompassing the test plan, history, results, analysis, and recommendations.	2,1,1,1,10,1, 1,1,1	Phase I	1 month after testing	A, B, C, E, J, L, O, R, S
35 (SOW 2.6, 2.7)	Qualification ETG Test Plan and Qualification MMRTG Test Plan	Describes the test requirements and identifies pass/fail criteria for each test.	2,1,1,10,1,1, 1	Phase II	Prior to testing	A, C, E, J, O, R, S
36 (SOW 2.6, 2.7)	Qualification ETG Test Report and Qualification MMRTG Test Report	Provides a stand-alone document encompassing the test plan, history, results, analysis, and recommendations.	2,1,1,1,10,1, 1,1,1	Phase II	1 month after testing (updated as required, e.g., for lifetest data)	A, B, C, E, J, L, O, R, S
37 (SOW 1.10.5, 2.13.5, 3.11.5, 4.11.5, 5.11.5)	Interface Working Agreement (IWA)	Interface activities with Government Laboratories to include Contractor responsibilities and authority.	2,1,1,1,1,1	All Phases	As required	A, C, E, O, R, S
38 (SOW 1.11.1, 2.14.1, 3.12.1, 4.12.1, 5.12.1)	Quality Assurance Program Plan (QAPP) and Applicable Procedures	Describes general requirements for managing, planning, conducting, and evaluating a quality assurance program.	2,1,1,1,1	Phase I, updated as required in subsequent phases	Within 1 month of initial contract award, updated as required	A, C, O, R, S
39	Configuration Management Plan	Describes general requirements for managing, planning, conducting and evaluating a configuration management program.	2,1,1,1	All Phases	As required	A, C, R, S

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
40	Software Management Plan	A management plan that describes the development, design, testing and configuration control of software in accordance with SNSP/PQAR-1.	2,1,1,1,1	Phase II, updated as required in subsequent phases	Within 1 month of initial contract award, updated as required	A, C, O, R, S
41 (SOW 1.11.2, 2.14.2, 3.12.2, 4.12.2, 5.12.2)	Reliability Program Plan	Describes the methodology for planning, establishing, implementing, documenting, and maintaining control of a formal reliability program.	2,1,1,1	Phase I, updated as required in subsequent phases	Within 1 month of initial contract award, updated as required	A, C, R, S
42 (SOW 1.11.2, 2.14.2, 3.12.2, 4.12.2, 5.12.2)	FMECA	Documents the Failure Mode Effects and Criticality Analysis of the MMRTG.	2,1,1,1	Phase I, updated as required in subsequent phases	Prior to the PDR and FDR	A, C, R, S
43	Functional and Equipment Block Diagrams	Provides Functional and Equipment Block diagrams of entire system down to the component level. Each block should indicate the current predicted reliability and the apportioned reliability goal. (See OSNP-3, para. 5.5)	2,1,1,1,1	All Phases	Prior to the PDR and FDR	A, C, O, R, S

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
44	Engineering and Production Drawings and Specifications	Release of drawings and changes related to the ETG/MMRTG using established format and content of the Contractor's fabrication, engineering, quality processes, procedures, and specifications.	2,1,1	All Phases	As required	A, C, O
45 (SOW 1.11.2, 2.14.2, 3.12.2, 4.12.2, 5.12.2)	Failure Reports	In accordance with OSNP-3.	2,1,1,1,1	All Phases	As generated by Contractor	A, C, O, R, S
46	Class I Changes to Specifications and Drawings and Non- Conformance Reports	Changes or non-conformance conditions that adversely affect safety, qualification status, performance, reliability, interchangeability, or interface characteristics.	2,1,1,1,1	All Phases	As required	A, C, O, R, S
47 (SOW 1.11.2, 2.14.2, 3.12.2, 4.12.2, 5.12.2)	Failure Reporting and Corrective Action System (FRACAS)	Documentation as required by OSNP-3.	2,1,1,1	All Phases	As required	A, C, R, S
48	Certificates of Inspection	In accordance with PQAR.	1,1,1	All Phases	As required	C, R, S
49 (SOW 1.8.2, 2.11.2)	Preliminary Safety Test Plan	Provides the specific test, test requirements and test hardware that will be required to support the launch approval process.	1,1,3,1	Phases I,II	As required	A, C, L, O
50 (SOW 3.9, 4.9, 5.9)	Safety Test Plan	Provides the specific test, test requirements and test hardware that will be required to support the launch approval process.	1,1,3,1	Phases III-V	As required	A, C, L, O

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
51 (SOW 2.11.1)	Preliminary Safety Analysis Report (PSAR)	Necessary in support of INSRP review.	1,1,3	Phase II	As required	A, C, L
52 (SOW 3.9, 4.9, 5.9)	Draft Safety Analysis Report (DSAR)	Necessary in support of INSRP review.	1,1,3	Phases III-V	As required	A, C, L
53 (SOW 3.9, 4.9, 5.9)	Final Safety Analysis Report (FSAR)	Necessary in support of INSRP review.	1,1,3	Phases III-V	As required	A, C, L
54 (SOW 3.6, 4.6, 5.6)	Flight ETG Processing Plans and Procedures	Provides processing, assembly, handling and operating plans and procedures of the Flight ETGs.	2,1,1	Phases III-V	As required	A, C, O
55 (SOW 3.5, 4.5, 5.5)	Flight ETG Acceptance Test Plan	Describes the test requirements and identifies pass/fail criteria for each test.	2,1,1,10,1,1, 1	Phases III-V	Prior to testing	A, C, E, J, O, R, S
56 (SOW 3.5, 4.5, 5.5)	Flight ETG Test Report	Provides a stand-alone document encompassing the ETG Test Plan, history, results, analysis, and recommendations.	2,1,1,1,10,1, 1,1,1	Phases III-V	1 month after testing	A, B, C, E, J, L, O, R, S
57 (SOW 3.5, 4.5, 5.5)	Flight ETG Data Package	Provide documentation for each Flight unit to be used as part of the government buy-off process.	3,1,1,TBD	Phases III-V	Not less than 2 weeks prior to the formal buy-off	A, C, O, TBD-program participants
58 (SOW 3.6, 4.6, 5.6)	Summary Flight MMRTG Test Report	Provides a stand-alone document encompassing the MMRTG Test Plan, history, results, analysis, and recommendations.	2,1,1,1,1,1, 1,1	Phases III-V	1 month after testing	A, B, C, E, L, O, R, S

CDRL Number (SOW Ref)	Title	Description	Copies Required (Est.)	Phase	Due Date	Addressees
59 (SOW 3.11.2, 4.11.2, 5.11.2)	Shipment Readiness Review(s)	Review conducted prior to shipment of Flight MMRTG.	3,1,1,TBD		Not less than 2 weeks prior to the formal review meetings	A, C, O, TBD-program participants
60 (SOW 3.11.2, 4.11.2, 5.11.2)	Buy Off Review(s)	Review conducted prior to release of ETG from the Contractor site to Mound and after MMRTG testing at Mound	3,1,1,TBD	Phases III-V	As required	A, C, O, TBD-program participants

^{*} The DOE Project Manager may make changes in, or add to, the distribution list, so long as the total number of copies called for does not exceed the number of copies required.

CDRL AND REPORT ADDRESSEES

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